of 900,000 adults. Multiple linear regression analysis of simulation output relating LE to levels of BMI was conducted using R. **RESULTS:** Results were obtained for 1855 subjects with mean age 63.6 years, 53% male; 16% current smokers; duration of diabetes 9.5 years; HbA1c 7.4%; SBP 135mmHg; total cholesterol 195mg/dl and BMI 30.6kg/m^2. Using UKPDS mortality risk the predicted mean discounted LE was 11.8 years with each unit increase in BMI associated with a 0.06 years less life expectancy. Using BMI cause specific mortality decreased mean discounted LE to 10.85 years; with each unit increase in BMI linearly associated with a 0.2 years reduction in LE. **CONCLUSIONS:** Failure to adequately incorporate the deleterious effect of increasing levels of BMI on risk of mortality may substantially distort the health economic assessment of type-2 diabetes specific therapies; particularly those associated with the avoidance of weight gain or weight loss.

PDB56

A SYSTEMATIC REVIEW OF COST-UTILITY ANALYSES IN DIABETES

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OBJECTIVES: To review and systematically synthesize the cost-effectiveness of diabetes interventions. **METHODS:** We conducted a systematic review of cost-utility analyses (CUAs) related to diabetes published between 1994 and 2012, using the Tufts Medical Center Cost-Effectiveness Analysis Registry (www.cearegistry.org). We described the study characteristics, such as country, type of interventions, perspective, funder, and whether the intervention was recommended by the American Diabetes Association (ADA) guidelines. We also examined the distribution of the incremental cost-effectiveness ratios (ICERs) and used logistic regression to identify factors independently associated with favorable ratios (defined as less than the median of all diabetes-related ICERs). **RESULTS:** We identified 167 CUAs from over 20 countries, pertaining to interventions for Type 1, Type 2, gestational diabetes mellitus, and diabetes complications and comorbidities. Studies conducted in the US and UK accounted for 40% and 18% of all CUAs, respectively. Fifty-four percent of diabetes CUAs examined pharmaceuticals; 70% focused on tertiary prevention. Most (88%) used a health care payer perspective and more than half (52%) were industry-sponsored. Of 425 published cost-utility ratios, 80% examined an ADA-recommended intervention (e.g. annual retinopathy screening) relative to a comparator. Approximately 71% of interventions examined in diabetes CUAs were either cost-saving or below $50,000 per QALY, regardless of whether the service was recommended by the ADA. Logistic regression analysis showed that CUAs conducted from the US perspective were more likely to report favorable ratios than non-US CUAs (OR=2.45; 95% CI=1.12, 5.38). Ratios for diagnostic or screening tests were more favorable than other intervention types (OR=3.75; 95% CI=1.03, 13.66). **CONCLUSIONS:** Most interventions examined in diabetes CUAs were recommended by the ADA and demonstrated good value for money. Further studies are needed to explore the utilization of interventions with favorable ratios using the real world data.

PDB57

THE COST AND PRODUCTIVITY CONSEQUENCES OF NON-SEVERE HYPOGLYCAEMIC EPISODES (NSHE) IN PATIENTS TREATED WITH SULFONYLUREA OR DPP4 DUAL COMBINATION ORAL THERAPY

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OBJECTIVES: Hypoglycemia is a major consideration in the management of blood glucose in people with type 2 diabetes. NSHE occur more frequently than severe episodes and account for the majority of hypoglycemic burden. Recent data has quantified the per-event costs of NSHE in terms of productivity loss and out-of-pocket expenses. The aim of this study was to model the cost implications for NSHE in relation to sulfonylurea or DPP-4 based dual combination blood glucose lowering regimens **METHODS:** Published patient source data was used to obtain workplace productivity costs, out-of-pocket (OOP) expenses and estimates of the frequency of NSHE. The IMS CORE Diabetes Model (CDM) a validated and widely used simulation model was initiated with dual therapy patient profiles derived from NHANES and efficacy profiles for metformin + sulfonylurea (M+S) versus metformin + DPP-4 (M+D) obtained via a mixed treatment comparison. Costs (2010) and benefits are in USD and discounted at 3%. **RESULTS:** In the published patient source data mean weighted productivity cost of each NSHE was $34.87 with monthly OOP of $35.56 with 24.9% of T2DM patients reported NSHE frequency of 'daily' to "about 1/week". Assuming a frequency of 1 NSHE per week M+D is associated with an incremental annual cost of $212 compared to M+S when including productivity and OOP expenses over a 1-year period . Over a lifetime, discounted cost per quality adjusted life year gained was $2,419. **CONCLUSIONS:** Sulfonylurea based dual combination therapy is potentially associated with substantially greater economic consequences for employers and patients compared with DPP4 based dual therapy regimens. Therefore greater consideration should be given to the productivity related consequences of hypoglycaemia with respect to dual therapy escalation, particularly in people with type 2 diabetes of a working age.

PDB58

EFFECTS OF PATIENT-REPORTED HYPOGLYCAEMIA ON RESOURCE USE AND PATIENT WELL-BEING IN BELGIUM

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OBJECTIVES: Limited data exist on the use of health care resources due to hypoglycaemia induced by insulin therapy in diabetes patients. This study investigated the frequency of patient-reported non-severe hypoglycaemic events (NSHE) in type 1 (T1) and insulin-treated type 2 (T2) diabetes patients and their impact on health care resource use in Belgium. **METHODS:** T1 and T2 diabetes patients aged > 15 years were recruited via existing panels to complete four questionnaires collecting data at weekly intervals. In addition to demographics, data were collected on frequency of NSHE with a 7-day recall period, as well as data including impact on patient well-being, work productivity and health care resource use. NSHE was defined as an event with symptoms of hypoglycaemia, with or without blood glucose measurement (BGM), or low BGM without symptoms, which the patient could manage without assistance. Severe hypoglycaemic events (SHE), an event needing help from a third party to manage, were also reported. **RESULTS:** Overall, 412 patients (44% T1, 56% T2) completed 1148 patient-weeks. Mean NSHE per patient-week were 2.3 in T1 patients and 0.7 in T2 patients. Following their last NSHE, 64% patients reported feeling tired/fatigued, 59% feeling less alert and 37% feeling ill/uncomfortable. Over the 7 days following a NSHE, BGM test-strip use increased by 3.4 (mean). In employed patients (38%), 13% of NHSE were associated with lost work time. Following daytime NSHE, 6% of T1 patients and 17% of T2 patients contacted a health care professional, plus 8% of T1 and 6% of T2 following a nocturnal NSHE. Mean annual frequency of SHE was 0.6. Of the 124 patients reporting a SHE, 17% required emergency visits. **CONCLUSIONS:** NSHE have an economic burden with a negative impact on patient well-being. However, the real burden of hypoglycaemia may be underestimated since few patients report events to a health care professional.

PDB59

IMPACT OF NON-SEVERE HYPOGLYCAEMIC EVENTS ON PATIENT WELL-BEING AND HEALTH CARE RESOURCE USE

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OBJECTIVES: Hypoglycaemia is a frequent side effect of insulin treatment for patients with diabetes and can impact on quality of life, well-being, work productivity and health care resources. This study explored patient-reported frequency of non-severe hypoglycaemic events (NSHE) and the impacts of these events on patients' lives and health care resource use in Germany. **METHODS:** Patients over 15 years of age with Type 1 (T1) or insulin-treated Type 2 (T2) (basal only T2BOT; basal-bolus T2BB and other regimen T2O) diabetes were recruited in Germany via online panels to complete four questionnaires at weekly intervals. Data were collected on hypoglycaemia-related resource use and the impact of the last hypoglycaemic event on patient well-being and work productivity. NSHE was an event with symptoms of hypoglycaemia, with or without blood glucose measurement (BGM), or low BGM (≤ 3.1 mmol/l) without symptoms, which the patient could manage without assistance. **RESULTS:** In total, 614 patients (34% T1 and 66% T2) participated in the study. Overall self-reported mean NSHE were 1.0 per patient week (1.6 for T1, 0.6 in T2BOT, 0.6 in T2BB and 0.8 in T2O). Following the last NSHE, 64% of patients reported feeling tired/fatigued with 51% and 39% feeling less alert and nervous/anxious, respectively. Overall employment rate was 53%. A total of 14% of patients reported loss of work time due to the last NSHE. Mean increase in BG test-strips use was 3.86 over the 7 days following each NSHE equating to an estimated additional resource use of €2/patient/event (cost/strip €0.5). Following a daytime NSHE 14% of T1 and 23% of T2 patients contacted a health care professional (nurse/physician), plus 16% of T1 and 13% of T2 patients following night-time events. **CONCLUSIONS:** NSHE have a negative impact on patient well-being and are associated with work time loss and increased use of health care resources in Germany.

PDB60

THE PATIENT-REPORTED HEALTH RELATED EFFECTS AND ECONOMIC IMPACT OF HYPOGLYCAEMIC EVENTS IN SPAIN

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OBJECTIVES: Hypoglycaemia has negative implications for healthcare resources and diabetes patients' quality of life. However, there are limited data available on hypoglycaemia in a real-world setting. This study investigated the economic and health-related impact of self-reported non-severe hypoglycaemic events (NSHE) and severe hypoglycaemic events (SHE) in Spain. **METHODS**: Patients over the age of 15 with type-1 (T1) or insulin-treated type-2 (T2) diabetes were recruited via existing panels to complete four questionnaires at weekly intervals. Data were collected on frequency of NSHE and SHE, and their impact on patient well-being, work productivity and health care resource use. NSHE was defined as an event which the patient could manage without assistance and SHE as an event needing help from a third party to manage. **RESULTS**: In total, 630 patients completed 2238 patient-weeks. Mean self-reported NSHEs per patient week were 1.7 in T1 patients and 0.5 in T2 patients. After their last NSHE, 67% of patients reported feeling tired/fatigued with 45% feeling less alert and 42% feeling ill/uncomfortable. Over the seven days following a NSHE, blood glucose measurement test-strip use increased by a mean of 5.3. In employed patients (43%), 18% of NSHE were reported to lead to lost work time. A total of 8% of T1 and 20% of T2 patients contacted a health care professional following a daytime NSHE, and 12% (T1) and 20% (T2) following a night-time NSHE. After a SHE, 30% of patients required emergency visits. **CONCLUSIONS:** Hypoglycaemic events are a common occurrence in T1 and insulin-treated T2 patients in Spain and present an economic burden through increase in health care-resource use and work time loss. They also have a negative impact on patient well-being. However, the real burden of hypoglycaemia may be underestimated as events are often not reported to a health care professional.